What's Working:

Vegetation Establishment & Maintenance

July 2016

Restoration Monitoring and Evaluations

2016 Information

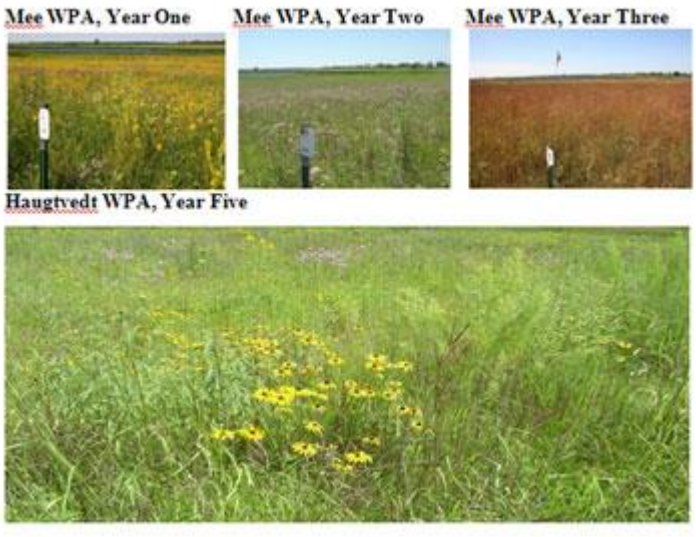
- Don't expect an impressive prairie in years one and two, and possibly even in year three and four. In fact it will be downright ugly the first two years, but don't let that alarm you. One should leave it alone as much as possible. Don't mow the site unless your local conservation office or weed inspector says so. And be all means do NOT spray the site once it starts growing. Native plants do a very good job at out competing those "weedy" species. And those "weedy" annual species actually provide very good habitat and forage for a myriad of species. The more species one plants, it will improve your pollinator, pheasant, and other wildlife habitat, weed control, establishment time frame and aesthetics.
  (Farm Bill Partnership Staff)

2013-2014 Information

- Not Surprisingly, the first thing I look for as I walk around a prairie is the pattern of habitat structure. I hope to find the full range of variation, from tall and dense vegetation to almost bare ground. Even more importantly, I want to see some of the important intermediate habitat types – especially short-cropped grass with tall forbs (wildflowers), which is incredibly important for many wildlife and insect species. If I can find all of those habitat types, and they're in different places than they were last year, I feel pretty good (Chris Helzer – Prairie Ecologist post on "What I Look for When I Walk Through My Prairies").

2008-2012 Information

- Prairie restoration is a process that takes time. Like weed management, one must think long-term. Pictured is a general description of what can be expected during the first 5 growing seasons of the restoration.
  Year 1: After seeding during the winter/early spring, the seeded field will continue to appear as though it is untilled soybean stubble through May and into June. By July the field will green over and by late August to mid-September plants flowering will include



annuals such as pigweed, kochia, and sow thistle along with many native spp. such as big bluestem, bearded wheatgrass, Indiangrass, Maximillian sunflower and red-stemmed aster.
Year 2: The second year of growth is "visually" the most difficult year. This is the year of the biennials Thus the field will begin the growing season with many golden alexanders, black-eyed susans and daisy fleabanes, but soon progress in June to the bolting stage of plumeless and Canada thistles along with some remaining sow thistle. By the end of July the natives will begin to dominate the stand with grasses and forbs of many types blossoming and going to seed. The growing season ends with a flush of native goldenrods and various asters.
Year 3: The third year of growth will see the native grasses begin to get what we refer to as "large shoulders" where grass stem density is dramatic and a marked decrease is noted in the unwanted spp. such as thistles. Sow and plumeless thistle wane, a few Canadas remain. All native spp. will attempt to blossom and seed out.
Year 4: During the fourth growing season the vitality of the native spp. will be apparent as there will be a wide variety of natives flowering from early spring till freeze-up. Sow and plumeless thistle are/nearly all gone. Some Canadas may remain, but are visually insignificant.
Year 5: By year five the field will be essentially converted to a diverse native plant community with approximately 85% native and 15% non-native spp. -- of which less than 5% will be considered "weed" spp. (Rebecca Esser, U.S. Fish and Wildlife Service).

- Regardless of the variation in challenges faced by sites, the universal keys to success are consistent evaluation and adaptive management. Evaluation strategies should be tied to the original objectives for the restoration project. If the objective is to increase habitat for grassland nesting birds, the abundance and nesting success of grassland birds should be measured. However, if the objective is to increase the size and viability of the larger prairie community, indicators of that success should be identified and measured. For example, populations of species in adjacent remnant and restored prairies could be assessed to determine whether or not the restoration is acting as an extension of the remnant habitat. Whatever the restoration objective, evaluation should be a regular part of long-term management plans. Year-to-year climatic variation makes it difficult to assess progress within a short time window, so plan to repeat measures in order to establish trends. Management should then be adapted to address whatever trends are seen, whether those trends indicate changes in invasive species abundance, plant or insect diversity, or more complex markers of ecological function(Lessons Learned from the TNC Grassland Restoration Network: 2003-2010).